Introduction to the Iowa Department of Natural Resources Risk-Based Corrective Action Online Application

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In early 2017, the Iowa DNR Underground Storage Tank Section will be transitioning from a traditional client-server type risk-based corrective action (RBCA) software program to a web-based application. The new web-based application ("application") will perform the same functions as the Tier 2 Version 3.0 software ("software") in essentially the same ways. Site specific target levels and risks determined will be unchanged. Two major changes exist; the new application is hosted entirely online, and correct mathematical analysis of all water line receptors is now possible.

Great effort has been expended to ensure that the transition to the new application is as smooth as possible; however, growing pains are inevitable and some new things will have to be learned and some adjustments made. We believe that people knowledgeable of or trained on the RBCA software (versions 2.51 and later) will recognize common workflows and all of the required features and naming conventions of the software when using the application. Risk analyses from the application will be identical to what was calculated in the software. Site Specific Target Levels (SSTLs) in the application will be +/- 1% of the values found in version 3.0 of the RBCA software.

The items listed below are important points of interest for understanding and operating the new RBCA application. Please read through them before attempting to complete work on a site in the new application.

Things to Know

- Google Chrome is the preferred web browser for the RBCA application. The application is stable and fully functional on all common browsers, though printing and some data entry fields may have optimal appearance in Chrome. (Update 01/31/17: At this time, Apple iOS and Android devices do not have complete functionality).

- The new RBCA application is entirely hosted online and is subject to the same rules as other State of Iowa applications. This means that a logged-on session will expire after 15 minutes of *inactivity*. Please make sure that you use the Save and/or Update buttons to avoid losing unsaved data due to inactivity.

- Records associated with the RBCA process have always been and will continue to be public record available to all citizens. Formerly, it was necessary to make a public

records request or come to DNR Records Center in person to view the reports or obtain software files. It is worth noting that information contained in the application will be easier for the public to access than were files that required RBCA software. Once a RBCA application report has been submitted, the record will be visible to the public (whether or not it has been reviewed by a DNR Project Manager).

- The column in the Soil Gas Data table for sample elevation is currently mis-labeled "Soil Source Elevation". This label will be fixed in a forthcoming update. Please enter data for soil gas sample elevation as has been done in previous versions of RBCA.

Logging in

- A valid Iowa Enterprise A&A user name and password will be required in order to use the new RBCA application in *edit* mode. Click on "Create an Account" at the top of the RBCA application log in page to obtain an Iowa Enterprise A&A account if you do not already have one. This is the same account (and same user name and password) that is used for well searches in Facility Explorer. CGPs will already have an A&A account. **If you are a new CGP or CGP assistant, you will need to contact the DNR UST Section to ensure that your information has been added to the list of RBCA users.**

- The new application will be available to the general public (just like the Tanks Database), though various types of users (called "roles") will have different levels of access with different privileges.

    o CGPs and CGP assistants (CGPAs) will be able to access all LUST sites assigned to any CGP working for the same company (as recorded in the Tanks Database). The CGP and CGPA have essentially the same rights. Both can begin a new RBCA application-based report, edit an in-process report, download data, and save reports. *Only* CGPs will have the ability to *submit* a report to DNR.
    o DNR project managers (PMs) will have the same rights as CGPs with the exception of the added ability to accept and reject reports.
    o DNR employees who are not PMs such as Field Office staff can view RBCA application reports, view monitoring well selections, and download data, but cannot edit or approve/reject reports.
    o Administrators have all of the rights available to DNR PMs along with the abilities to delete reports and "unlock" RBCA application reports that have been submitted, but not yet approved/rejected.
    o The general public will have view only rights to RBCA application reports and data once they have been submitted to DNR.

- After you are logged on, your name and individual role will be displayed in the lower right hand corner of the screen.

Searching for a LUST Site and Selecting a Report

- Once a user is logged in, they may search by LUST name, LUST number, UST registration number, address, city, county, field office, risk classification, or any combination of these.

- Search results will populate as a list below the search box with corresponding LUST numbers, names, risks, and cities. Select the site in which you are interested.

- The site home screen will list information about the site taken from the Tanks Database and have a list of RBCA application reports either completed or in progress for the site. Each row indicates an individual report (Tier 2, SMR, etc.). Each report will have a type, description, dates, status, CGP, and reclassification requests noted.

- The far left column will list the actions available to the user for each report.

    o View: The user can view the report, but not make any changes.
    o Edit: Allows edits or data additions to be made to all areas of the report. Will not be available after the report is submitted.
    o Delete: Only available to the Admin.
    o Play: A new feature available at all times allowing the user to "test" the effects of altering any parameter they wish without actually changing the original copy. For example, if you wanted to know what the result of adding a monitoring well in a particular spot might be on a plume, you could create a Play copy of the given report, add the well in the Play, and see how the plume is affected without the worry of compromising the original. The Play feature will create a virtual clone of the report for which is it activated at the time of the activation. Play copies can be saved for future use or for use in negotiations. If you will not use a play copy in the future, we recommend deleting it to avoid clutter on the site page.

- If this is the initial RBCA application report for a given site (i.e. nothing exists *in the new* RBCA application because there was no existing software file to upload), you will need to select "New Tier 2" and begin a new report. Sites in the SMR stage and

either high or low risk as of February, 2017 will have their Tier 2 and most recent SMR data uploaded to the application.

Navigating, Saving, Updating, and Submitting Reports

- A "Back" button is provided on each page. This button will take you back one level closer to the main site page each time it is clicked. Using the Back button is preferred to using the back arrow on your browser if you have made changes to a screen or data table. This will ensure that your new data or selections are properly preserved.

- Data entry screens have "Save" buttons located below the data tables that must be clicked in order for any data that has been entered to stay in the table after leaving the screen. A small message box will appear in the upper right hand corner of the screen noting that the save was successful. The "Save" button will not save data if it is clicked after a session has been timed out. Note: Logged in sessions will expire or be "timed out" after 15 minutes of inactivity.

- Screens where selections are made (such as monitoring well selection or borehole zoning selection) will automatically preserve the selections made when exiting the screen. No "Save" button is provided on these screens.

- If you attempt to save or submit a report and all required data has not been supplied, or all necessary selections have not been made, an error message in the upper right hand corner will notify you that the report or field is not complete and offer instructions on how to rectify the situation.

- The main report page has two blue buttons at the top:

  o Update: This button will update all site parameters and equation results with the most recently entered data and selections. It is recommended that a user clicks the Update button before exiting the application to make sure that all work is saved and up to date.
  o Submit: The Submit button will only be available to CGPs and is the final step in the process of completing a report in the RBCA application. After all data is entered and you are satisfied with the results, click the Submit button to send and complete the report process. This will automatically send an email to the DNR PM alerting them that a RBCA application report has been submitted for

the site. **This action is a signal that the report is finished and no more work will be completed in the RBCA application before DNR review.**

Free Product Reporting

- Built into the new web-based RBCA application is the ability to report free product recovery data online. A button entitled "Free Product Data" is located below the site information on the report selection screen of each site. You may begin entering free product recovery data in this location immediately if you choose. In the future, all free product data will be recorded in this location, but for the time being, it will be optional. If you choose to record recovery data online, please work with your DNR PM to ensure that everyone is aware of the change.

    - An email will be automatically generated and sent to the project manager associated with a given LUST each time new free product data are entered.

Other Changes and General Information

- Every effort was made to upload as much information from the most recent software file of each high and low risk LUST site into the database of the new application; however, since the programming formats of the two systems are dissimilar, it was not possible to upload all user-selectable or qualitative data.

- Before completing any pathway evaluation in the new application, it will be necessary to view **and save** groundwater, soil, and soil gas data. Data analysis will not be available until the sample data tables have been saved in the new application by clicking the "Save" button located below the data table.

- The "Use in Model" check box replaces the "Data Adjustment" feature in the software that was separate from the data entry table. Due to variations in how the data is stored, all sample data that has been bulk uploaded is defaulted to "use in model". If a sample was "ignored" in the software, the user will be required to *unclick* the "Use in Model" check box for the given sample and save the data table in the new application.

- The user will need to re-answer Questions (Before Modeling, Soil Gas, and Surface Water) in the Tier 2 module and re-select the monitoring plan in order to obtain results identical to those in the software.

- Users will need to plot and select source widths and lengths for each chemical of concern in the new application. **Please note:** The chance of multiple plumes being plotted by the new application is higher than for the former software. Check plumes to make sure they match.

- Compare input data (such as hydrogeology data) uploaded to the application with the software file. Some parameters have fewer decimal places allowable in the application. If you obtain site specific target levels (SSTLs) or simulated concentrations that are greater than 1% different from previous values, it is a good idea to ensure that hydrogeology and source width/length data match. If all sample and input data are identical, the software and application will deliver results that are less than 1% different (often much less than 1%).

- All receptor data contained in software files will be uploaded to the new application **with the exception of water line data.** Water line data is now separated into four types with varied target levels necessitating re-entry.

  - Water Line A: PVC or iron water **mains** with non-petroleum resistant gaskets
  - Water Line B: PVC or iron water **service lines** with non-petroleum resistant gaskets
  - Water Line C: PE/PB/AC/plastic water mains and service lines
  - Water Line D: Petroleum resistant water mains and service lines (**non-receptors**)

- It will not be possible to plot source width and length for chemicals having less than three data points. This should produce fewer extraneously large plumes and corresponding Sw/W values that do not represent reality.

- Naphthalene has been removed as a chemical of concern throughout the application.

- Methyl-tertiary butyl ether (MtBE) has been added to the groundwater data table. This will provide a convenient place to store MtBE data rather than submitting separate Excel files. Individual sites retain their formerly agreed upon MtBE reporting requirements.

- Waste Oil (TEH-WO) has been removed from the chemicals of concern for soil samples since no target levels have been published. Waste Oil will still be included in the soil data table for informative purposes.

- Viewing and printing of Monitoring Maps has been conveniently relocated inside the Pathway Evaluation buttons.

- Many of the monitoring well and borehole parameters (such as zoning designation and risk) that were toggled or entered in the software are now small dropdown menus in the application. You may either use the mouse to select a well and the appropriate designation, or for quicker data entry, use the Tab and arrow keys.

- When completing a revision of the Tier 2 model (or when adding new data *after* completing a pathway evaluation) in the application and adding new groundwater, soil, or soil gas data, it is necessary to reopen the appropriate preliminary receptor evaluation requirements and the pertinent pathway evaluation(s). Data that will later be used to calculate entries in the monitoring plan is generated in these areas and if they are not reopened prior to generating a monitoring plan, it is possible for receptors that should either drop off or be added to the monitoring plan to not display on the plan.

- The acronym "PWL" formerly stood for *plastic* water line. Henceforth, it will denote a *potential* water line.

- Drinking water or non-drinking water wells that *are not* to be used for RBCA purposes (SSTLs, contouring, risk analysis) should not be entered into the groundwater sample data table (even if they are going to be "ignored"). The new application has a special area for entering non-RBCA water samples collected from things such as taps, faucets, water lines, hydrants, wells, and surface waters.

- Maps will be available as either a pdf file or a dxf (AutoCAD) file. In order to print a map, the user will need to:

  1. Enter the desired scale into the "Zoom" box and click "Plot".
  2. Toggle the "Show Print Area" feature. Gray lines will appear denoting the area that will be converted to pdf. Move the plot to correspond with the available print area. It may be necessary to adjust the scale to ensure that the entire plot can be printed on a single sheet of paper.
  3. Click "Export" and choose pdf as the file type.

4. Make certain to <u>un</u>-check the "Fit to Page" option when printing your pdf map. If you do not un-check this option, the map may not print at the desired scale depending on the settings of your individual printer and computer.

5. If you need an AutoCAD file, simply select "dxf" and the application will deliver this file type.

* 02/03/2017: We are aware that occasionally words at the top of a pdf map are cut off when printing. This issue has already been remedied on the test server and will be applied to production as soon as soon as the next batch of code is uploaded.

- Required elements of the physical Tier 2 Report copy *other than maps*, such as sample data, data before modeling, and monitoring plans will be printed directly from the application (from your web browser). To print these items simply click the right mouse button and select "Print" from the menu displayed. The required items have been optimized to ensure that they will print properly; however, if a page is not printing correctly, you may need to expand the margins of the print area in your browser print settings. The pages have been sized to print correctly with the default settings in the most common web browsers. Some pages (such as data tables) will print more effectively in landscape format and some will be more efficiently printed in portrait format.

- The Tier 2 Cover Page is now a fillable pdf available on the DNR UST website (document 542-0723) rather than being printed from the application.

- In the software, it was possible at any time during the life of a LUST site to modify the Tier 2 portion of the software after a Tier 2 Report had been completed and accepted (i.e. during SMR or Tier 3 monitoring). Due to the database structure of the new application, it will no longer be possible to modify the Tier 2 module "on the fly". A revised Tier 2 report will be necessary if large-scale changes (things that cannot be changed in the SMR) are desired. **It will be important** to make certain all Tier 2 parameters are set appropriately before submitting the online report.

- Text entry boxes such as "Justification" will accept copy and paste text from the old application. You may copy the contents of the box in the software and paste it into the new application negating the need to retype it.

- All data tables that have blue column headers are sortable. For example, the column label "B (µg/L)" in the Groundwater Data Table for benzene concentration is blue, and sortable. The table will initially be sorted alphanumerically by well label. Clicking once on the Benzene column label will sort the column from lowest to highest and

the selection is expanded so that all rows are sorted as units. Clicking the Benzene label a second time will result in the column being resorted highest to lowest.